



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,072	04/20/2004	Andrew Harvey Barr	200208446-1	6038
22879 7590 07/13/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400				
			EXAMINER WANG, ALBERT C	
			ART UNIT 2115	PAPER NUMBER
			MAIL DATE 07/13/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/829,072

Applicant(s)

BARR ET AL.

Examiner

Albert Wang

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 June 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-10 and 12-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11 June 2007 has been entered.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/678,657. Although the conflicting claims are not identical, they are not patentably distinct from each other because changing performance of rack equipment is an obvious variation of changing power consumption and thermal load of rack equipment. Independent claims 1, 8, and

Art Unit: 2115

15 of the instant application correspond, respectively to claims 8, 1, and 14 of the pending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Although applicant's remarks, in the amendment received 2 November 2006, stated that a terminal disclaimer has been submitted, there is no terminal disclaimer on record.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 15-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The preamble of independent claim 15 indicates that the claimed modules are program code. While the specification teaches that capacity demand plan component 220 processes instructions (page 9, lines 19-20), the specification does not appear to teach the modules within capacity demand plan component 220 as being software modules (page 10, lines 1-12). Furthermore, the claimed master management control center is hardware as it is coupled to capacity control components via a communication bus (page 6, line 9 - page 7, line 7). Claims 16-20 depend on claim 15.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-4, 6, 8-10 and 12-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Fung, U.S. Patent No. 6,859,882.

As per claim 1, Fung teaches a method of dynamically changing rack capacity on demand, said method comprising:

receiving a rack equipment capacity alteration request (col. 35, lines 48-67, receiving activity information);

performing an analysis of said rack equipment capacity alteration request (col. 35, lines 48-67, analyzing activity information); and

changing performance of rack equipment in accordance with said analysis of said rack equipment capacity alteration request and wherein said changing of said performance of said rack equipment is based at least in part on a change to a client's business requirements (col. 35, lines 48-67, changing mode of server modules; col. 8, lines 39-49, change in load or quality of service).

As per claim 2, Fung teaches wherein said changing of said performance of said rack equipment includes altering said rack equipment performance settings (col. 8, lines 39-49; col. 35, lines 48-67).

Art Unit: 2115

As per claim 3, Fung teaches wherein changing said performance of said rack equipment includes changing performance capacity by said rack equipment in accordance with a capacity demand plan (fig. 9, control of server modules 402-1 to N based on control algorithm 432; col. 36, lines 24-67, control plan or policy).

As per claim 4, Fung teaches wherein said capacity demand plan indicates an increase in a voltage and a frequency of said rack equipment when a demand for capacity increases (col. 38, lines 42-67).

As per claim 6, Fung teaches automatically changing said performance interactively (col. 8, lines 39-49).

As per claim 8, Fung teaches a rack equipment capacity on demand system comprising:
rack equipment for processing data (figs. 1 & 6, server modules SM);
a capacity demand plan component for controlling operational changes to said rack equipment based on a capacity demand plan (figs. 1 & 6, management modules MM; fig. 9, management module 430 controls server modules 402-1 to N based on control algorithm 432; col. 36, lines 24-67, control plan or policy); and

a communications bus for coupling said rack equipment and said capacity demand plan component, wherein said communications bus is utilized for communicating information between said capacity demand plan component and said rack equipment (fig. 2, backplane; fig. 6, serial interface 142; fig. 9, AMPC or other bus; col. 17, lines 28-34), and

a master management control center for coordinating control of rack equipment among a plurality of racks (figs. 1 & 6, local or remote management node; col. 19, lines 11-63).

As per claim 9, Fung teaches said capacity demand plan component controls the amount of rack equipment resources assigned to an application (col. 8, lines 24-38).

As per claim 10, Fung teaches said capacity demand plan component switches on and off said rack equipment in accordance with said capacity demand plan. (col. 8, lines 39-49).

As per claim 12, Fung teaches said capacity demand plan is dynamically adjustable on the fly (col. 8, lines 10-23).

As per claim 13, Fung teaches said capacity demand plan is structured in accordance with business needs of a client (col. 8, lines 10-23).

As per claim 14, Fung teaches a memory for storing equipment information and capacity demand plan information; and a cross indexing component for cross indexing said equipment information and said capacity demand plan information (col. 20, lines 46-67, memory for storing control algorithm 432 and activity indicators from server modules).

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Fung as applied to claim 1 above, and further in view of Kanemaki et al., U.S. Pub. No. 2002/0174228 (hereinafter "Kanemaki").

As per claim 7, Fung does not expressly teach that verifying a payment associated with said rack equipment capacity alteration request is made. Kanemaki teaches that verifying payment for network access is a known business practice (pars. 0313-0317). At the time of the

Art Unit: 2115

invention, it would have been obvious to one of ordinary skill in the art to apply Kanemaki's teachings to Fung's method, as verifying payment for network access is well known in the art.

9. Claims 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over K.

Rajamani and C. Lefurgy, "On Evaluating Request-Distribution Schemes for Saving Energy in Server Clusters", In Proceedings of the IEEE International Symposium on Performance Analysis of Systems and Software, March 2003 (hereinafter "Rajamani"), in view of Fung, U.S. Patent No. 6,859,882.

As per claim 15, Rajamani teaches a computer-useable storage medium comprising computer-readable program code embodied therein for causing a computer system to implement a power pricing performance instructions comprising:

a capacity demand detection module for detecting indications of requests for capacity demand changes covered by a capacity demand plan (sec. 4.2, Request distribution);

a capacity demand administration module for administering examination of capacity demand changes (sec. 4.2, Managing server power-states); and

an instruction generation module for generating rack equipment performance adjustment commands to implement said capacity demand plan instructions (sec. 4.1, for management blade commands).

Rajamani does not expressly teach a master management control center for coordinating control of rack equipment among a plurality of racks. Fung teaches such a master management control center (figs. 1 & 6, local or remote management node for multiple racks; col. 19, lines 11-63). At the time of the invention, it would have been obvious to one of ordinary skill in the

Art Unit: 2115

art that a master management control center similar to Fung's is applicable to Rajamani's system of multiple racks, as centralized control is well known in data centers.

As per claim 16, Rajamani teaches a telemetry monitoring module for monitoring characteristics and activity of rack equipment associated with said equipment performance adjustments commands (sec. 4.1).

As per claim 17, Rajamani teaches an event spawning module for generating power pricing events (sec. 4.4).

As per claim 18, Rajamani teaches said instruction generation module comprises functionality for generating a command to postpone processing (sec. 4.4).

As per claim 19, Rajamani teaches said capacity demand plan information is an agreement between a host and a client and is structured in manner to accommodate business activities of said client (sec. 4.2).

As per claim 20, Rajamani teaches said telemetry monitoring module confirms that said performance equipment adjustment commands are complied with (sec. 4.2).

Examiner's note:

Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially

Art Unit: 2115

teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Albert Wang whose telephone number is 571-272-3669. The examiner can normally be reached on M-F (9:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AW



**CHUN CAO
PRIMARY EXAMINER**